Joint Chemical Agent Detector (JCAD)

MISSION
Provide local detection and warning of chemical agents, early warning of the presence of chemical agents, rapid-alarm response indication to high-concentration exposure; determine decontamination requirements for vehicles, equipment and personnel; and monitor terrain during chemical surveys.

DESCRIPTION AND SPECIFICATIONS
Joint Chemical Agent Detector (JCAD) a multi-mission, chemical-agent, point-detection system currently in development for the U.S. military. JCAD will detect, identify, quantify, and report the presence of nerve, blister, and blood agents. JCAD will also provide real-time detection and identification of toxic industrial chemicals. Equipped with a cumulative dosimeter, JCAD will be capable of accumulating and reporting miosis-level cumulative concentrations of one chemical agent, while still providing a rapid alarm response indication to a high concentration exposure from a different agent.

JCAD will store up to 72 hours of cumulative dosages and chemical alarms in its on-board memory for hazard level reporting, later playback, or download. JCAD's surface contamination survey instrument will pre-sort vehicles, equipment, and personnel to determine decontamination requirements and verify the completion of decontamination. It will also be utilized to monitor terrain during chemical surveys.

JCAD will be handheld or worn in a pouch that attaches to a warfighter's load bearing equipment. The JCAD will also be installed in military ground vehicles, aircraft, naval ships, and military installations.

JCAD interfaces to the user with a digital/graphic liquid crystal display, and a user-selectable audio and/or LED alarm. JCAD also provides for external data interface via an RS-232 port. Communication protocol complies with the Joint Technical Architecture and the Joint Warning and Reporting Network. The JCAD detector unit will weigh less than two pounds (0.9 kg), including the internal battery weight. The JCAD will operate on internal battery power using both rechargeable and non-rechargeable cells. JCAD will also operate under a variety of external power sources. It will operate in a wide range of temperature and altitude conditions and environmental conditions including blowing sand and rain, freezing rain, salt fog, and salt spray.

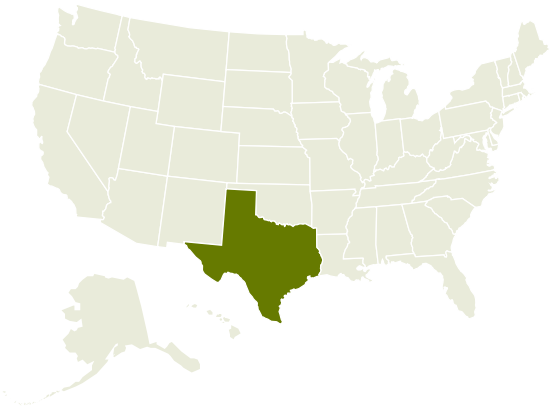
FOREIGN COUNTERPART
France; AP-2C

FOREIGN MILITARY SALES
None

PROGRAM STATUS
Current Engineering and manufacturing development is ongoing.

PROJECTED ACTIVITIES
FY02 Commence five-year Department of Defense procurement of more than 257,000 JCAD units. JCAD will eventually replace all current U.S. inventory chemical point detection systems.

PRIME CONTRACTORS
BAE Systems (Austin, TX)



* See appendix for list of subcontractors